

c) REMARKS

The claims are 44-48 and 51-54 with claims 44, 53 and 54 being independent. Support for the amended claims 44, 53 and 54 is found, inter alia, on pages 21, 22, 26 (line 27), 27 (line 22), 32, 33 and 35, as well as the results of Comparative Example 1.

Claims 44-48, 51, 52 and 54 were rejected as obvious over Ozin '666 in view of Kato '579. The Examiner admits Ozin fails to disclose the substrate containing an oriented polyimide with the sequence two or more adjacent methylene groups in the repeating unit. Kato '579 is said to teach a polyimide with the sequence of two or more adjacent methylene groups in a repeating unit of the main chain. Kato is said to teach the polyimide film is subjected to surface rubbing treatment to form an alignment film. From this, the Examiner believes it would have been obvious to employ an oriented polyimide film as the substrate in Ozin.

Claim 53 was rejected as obvious over Ozin in view of Mishina '539. Mishina is said to teach a polyimide having a sequence of two or more adjacent methylene groups in a repeating unit and that in Mishina the polyimide film is subjected to a surface rubbing treatment. The rejections are respectfully traversed.

It should be understood that it is the combination of a polyimide which is oriented and also having the specific sequence of two or more adjacent methylene groups which permits the tubular pores to be aligned uniaxially. The tubular pores are so oriented to be perpendicular to an in-plane rotation angle of 0° for the oriented polyimide, wherein the tubular pores have a Gaussian profile with a half-width distribution of orientation of direction of about 35° or less.

As noted on page 26, line 27 to page 27, the mesostructured thin film is uniaxially oriented in the mesochannels within a half-width distribution of orientation of direction of 35° or less. As noted in Comparative Example 1 where a polymer thin film had no methylene group in the repeating unit, then, even with rubbing, the mesochannels were curved at their end portions as shown in Fig. 7 (page 29), thereby providing inferior uniaxial orientation.

The combination of features noted above are not disclosed or suggested by the references of record, nor is there disclosed the need for the methylene groups and their effect on orientation combined with a rubbing treatment.

Claims 44-48, 51, 52 and 54 were also rejected as obvious over Kuroda '546 in view of Kato '579. The subject matter of Kuroda '546 and of the claimed invention were, at the time the subject invention was made, owned by the same person. Therefore, under M.P.E.P. §706.02.(l)(1) and 706.02(l)(2), Kuroda is removed as a reference.

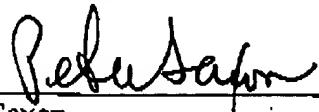
Claims 44-48 and 52 were rejected as an obviousness-type double patenting over claim 1 of Kuroda '546 in view of Kato '579. The Examiner admits claim 1 of Kuroda '546 fails to recite an oriented polyimide with a specific sequence of methylene groups. Neither Kuroda nor Kato show or claim the degree of orientation of the tubular pores.

Therefore, the present claims are patentably distinct over claim 1 of Kuroda '546.

The final rejection should be withdrawn, the claims allowed and the case passed to issue.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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